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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/664,857

09/22/2003

Kenji Umayahara

116675

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25944 7590 11/25/2009  
OLIFF & BERRIDGE, PLC  
P.O. BOX 320850  
ALEXANDRIA, VA 22320-4850

EXAMINER

WILLS, MONIQUE M

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

11/25/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/664,857	<b>Applicant(s)</b> UMAYAHARA ET AL.	
	<b>Examiner</b> Monique M. Wills	<b>Art Unit</b> 1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 and 24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-12 is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 24 is/are rejected.
- 7) ☒ Claim(s) 3,4,6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/15/09</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

This Office Action is responsive to the Amendment filed August 6, 2009. The rejection of claims 1, 2, 5, & 24 under 35 U.S.C. 103(a) as being unpatentable over Ogawa U.S. Pub. 2007/0003804 is reapplied on new grounds. Claims 8-12 are allowed. Claims 3, 4 & 6-7 are objected to.

### ***Allowable Subject Matter***

Claims 3, 4 & 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The instant claims are allowable over the prior art of record, because the prior art is silent to the generation of the alert being implement when fuel is consumed during the furl cell system performing a heat-retention operation (claims 3 & 6-7). With respect to claim 4, the claim is allowable because the prior art is silent to the alert being sent to an information terminal of the user suing wireless communication.

Claims 8-12 are allowed. The instant claims are allowable over the prior art of record, because the prior art is silent to the alert method of claim 8 including an

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information terminal of a user at a location away from the moving body using wireless communication.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5, & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa U.S. Pub. 2007/0003804.

Ogawa teaches a fuel cell monitoring system wherein first, in a step S1, it is determined whether the fuel cell stack 1 has stopped based on the start signal and stop signal input to the controller 20 from the system start/stop switch 53. For example, if the start signal is not input after the stop signal was input, it is determined that the fuel cell stack 1 is in the stop state. See paragraph 39. The fuel cell system further comprises an indicator 41 which displays a warning message or lights a warning lamp and encouraged the drive to refuel when the detected remaining fuel amount has fallen to a low level, and an alarm 42 which issues a warning sound or warning message encourages the driver to refuel when the detected remaining fuel amount has fallen to a low level. See paragraph 36.

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However, Ogawa does not disclose detecting the fuel amount after the fuel cell has stopped (claim 1) or generating the alert multiple times. *Ogawa does not expressly disclose communicating information related to the remaining fuel amount of an information terminal of a user located at a point away from a moving body that the fuel cell system is disposed on, is considered a function necessarily present in the teaching of Ogawa, specifically the reference an indicator 41 which displays a warning message or lights a warning lamp and encouraged the drive to refuel. The indicator is not one the fuel cell body.*

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to detect the fuel amount of the fuel cell has stopped, because rearrangement of method order is prima facie obvious. It is well within the artisan's skill to measure the fuel level after the fuel cell has stopped, as well as before as taught by Ogawa. The skilled artisan would be motivated to measure the fuel level after the fuel cell has stopped to determine a more accurate fuel consumption level.

With respect to generating the alter multiple times, it would have been obvious to duplicate the instant method step in order to further encourage refuel due to low fuel amounts.

The limitation with respect to *communicating information related to the remaining fuel amount to an information terminal of a user located at a point away from a moving body that the fuel cell system is disposed on, is satisfied, because the indicator 41* which displays a warning message or lights a warning lamp and encouraged the drive to refuel. The indicator is on a separate part of the vehicle or a separate moving body.

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Alternatively, it would have been obvious to one of having ordinary skill in the art at the time the invention was made to employ the indicator separate from the fuel cell, since it has been held that constructing formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

### ***Response to Arguments***

Applicant's asserts that Ogawa does not expressly disclose communicating information related to the remaining fuel amount to an information terminal of a user located at a point away from a moving body that the fuel cell system. Specifically, because claim 8 has been allowed. This argument is not persuasive as claim 8 requires wireless communication and claim 1 does not. Further, the limitation is satisfied *because the* indicator 41 which displays a warning message or lights a warning lamp and encouraged the drive to refuel. The indicator is on a separate part of the vehicle or a separate moving body. Alternatively, it would have been obvious to one of having ordinary skill in the art at the time the invention was made to employ the indicator separate from the fuel cell, since it has been held that constructing formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Patrick Ryan, may be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Monique M Wills/

Examiner, Art Unit 1795  
/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795